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| 09/843,363 | 04/25/2001 | Joshua Klipper | 100.164US01 | 8972 |
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| Fogg, slifer & Polglaze, P.A. P.O. Box 581009 Minneapolis, MN 55458-1009 | | EXAMINER MACE, BRAD THOMAS | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/843,363

Applicant(s)

KLIPPER ET AL.

Examiner

Brad T. Mace

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent No. 6,442,134 (Mitchell).

Regarding claim 1:

Mitchell discloses a method of protection in a network having a first and a second transmission ring (Figure 4), the method comprising: transmitting traffic to a plurality of remote nodes via the first and second transmission rings (Figure 4, i.e. nodes B, C, D); and globally selecting the first and second transmission rings to transmit and receive traffic based on alarm signals generated in the network (Figure 4, and col. 3, lines 45-51).

Regarding claim 2:

Mitchell further discloses summing all traffic received from the plurality of remote nodes (Figure 4, see nodes A, B, C, D).

Claim Rejections - 35 USC § 103

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,442,134 (Mitchell) in view of U.S. Publication No. 2001/0019536 (Suzuki).

Regarding claims 3, 7, 11, 15:

Mitchell further discloses a method of ring protection (and network), comprising: a plurality of ring segments coupled between adjacent network elements to form first and second transmission rings (Figure 4), wherein a head end node (central unit) transmits data on the first transmission ring in the first direction and transmits the same data on the second transmission ring in a second direction (Figure 4 and col. 2, lines 38-40 and col. 3, line 7); at a head end node (central unit): feeding traffic on two transmission rings (dual fed network) (Figure 4, i.e. node A); and summing all traffic received on the two transmission rings (Figure 4, i.e. node A); at remote nodes: when a remote node detects a facility failure on one of the two transmission rings (col. 3, lines 45-51), transmitting forward alarm signals on the one (first/faulty) transmission ring (col. 3, lines 45-51, hence the forward alarm signal is detected by the next node on the corresponding transmission ring) and globally selecting the one transmission ring to transmit traffic (Figure 4, "TX all traffic on both rings", hence the one transmission ring is selected to transmit, (and transmits to the head end node on the first ring, i.e. node A))

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and the other (second) transmission ring to receive traffic from the head end node (Figure 4, "If one ring fails, RX traffic from the other ring"); and when a remote node receives a forward alarm signal, passing the forward alarm signal on the transmission ring on which the forward alarm signal was received (col. 3, lines 45-51); and globally selecting the transmission ring on which the forward alarm signal was received to transmit traffic (Figure 4, "TX all traffic on both rings", hence the one transmission ring is selected to transmit) and the other transmission ring to receive traffic from the head end node (Figure 4, "If one ring fails, RX traffic from the other ring").

However, Mitchell does not disclose expressly a return alarm signals on the other (second) transmission ring.

Suzuki discloses sending a first (forward) alarm packet on the faulty transmission ring and a second (return) alarm packet on the other ring (Figure 7b, "first alarm packet, and second alarm packet").

A person of ordinary skill in the art would have been motivated to employ Suzuki in Mitchell in order to obtain a two-ring system that notifies both rings of a fault. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Suzuki with Mitchell (collectively Mitchell-Suzuki) to obtain the invention as specified in claim 3, in claim 7, in claim 11, and in claim 15. The suggestion/motivation to do so would have been to notify all (or some) nodes of both rings of a fault so as to adjust the path of transmitting and receiving (Figure 7b, and paragraph [0075]).

Regarding claims 4, 14, 20, 23, 25, 27, 31:

Mitchell discloses substantially all the claimed modified invention as specified above, however, does not disclose expressly when a remote node receives a return alarm signal, passing the return alarm signal on the transmission ring on which the return alarm signal was received; and globally selecting the transmission ring on which the return alarm signal was received to transmit traffic to the head end (central) node and one of the two transmission rings to receive traffic from the head end node.

Suzuki discloses when a remote node receives a return alarm signal, passing the return alarm signal on the transmission ring on which the return alarm signal was received (Figure 7b, "second alarm packet", and paragraph [288], hence the second alarm packet is passed on the transmission ring); and globally selecting the transmission ring on which the return alarm signal was received to transmit traffic to the head end node (Figure 7b, where the transmission ring on which the second alarm packet was received is used to transmit traffic) and one of the two transmission rings to receive traffic from the head end node (Figure 7b, where the "reserve label path" is used also to receive traffic).

A person of ordinary skill in the art would have been motivated to employ Suzuki in Mitchell in order to obtain a two-ring system that sends a return alarm signal to notify the nodes on the corresponding ring of the fault that has occurred. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Suzuki with Mitchell (collectively Mitchell-Suzuki) to obtain the invention as specified in claims 3 and 4, in claim 14, in claim 20, in claim 23, in claim 25, in claim 27, and in claim 31. The suggestion/motivation to do so

would have been to notify the nodes on the corresponding ring of the fault in order to adjust the path of transmitting and receiving (Figure 7b, and paragraph [0075]).

Regarding claims 5, 10, 21:

Mitchell further discloses wherein when a remote node detects a facility failure on one (first) of the two transmission rings comprises when a remote node receives a ring level failure alarm on one (first) of the two transmission rings (col. 3, lines 45-51, where “any node that has detected a fault on one of its incoming links”, hence receives/detects a signal informing it of a failure).

Regarding claims 6, 9, 13, 22, 24, 26, 28:

Mitchell discloses substantially all the claimed modified invention as specified above, however, does not disclose expressly at the head end (central) node, terminating received forward and return alarm signals.

Suzuki discloses at the head end node (central node) (i.e. packet transmission equipment 51-1), terminating received forward and return alarm signals (paragraph [289], where first and second alarm packets have a destination of packet transmission equipment 51-1, hence are terminated there).

A person of ordinary skill in the art would have been motivated to employ Suzuki in Mitchell in order to obtain a head end node that terminates forward and return alarm signals. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Suzuki with Mitchell (collectively Mitchell-Suzuki) to obtain the invention as specified in claims 3 and 6, in claims 7 and 9, in claims 11 and 13, in claims 20 and 22, in claims 23 and 24, in

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claims 25 and 26, and in claims 27 and 28. The suggestion/motivation to do so would have been to have the first and second alarm packets terminate at the head end node so that duplicate notification to the remote nodes is avoided.

Regarding claims 8, 12:

Mitchell further discloses wherein the head end (central) node sums traffic from the first and second transmission rings (Figure 4, i.e. node A).

Regarding claim 29:

Mitchell discloses a ring network, comprising: a plurality of network elements including a central unit (Figure 4, i.e. node A) and a number of remote units (Figure 4, i.e. nodes B, C, D); a plurality of ring segments coupled between adjacent network elements to form first and second transmission rings (Figure 4), wherein the central unit transmits data on the first transmission ring in the clockwise direction (clockwise, Figure 4, Ring Y) and transmits the same data on the second transmission ring in the counter clockwise direction (counter clockwise, Figure 4, Ring X); wherein when a failure is detected on both of the first and second transmission rings (Figure 4, "If both rings fail"), adjacent network elements transmit a forward alarm signal on the transmission ring on which the network element detected a failure (col. 3, lines 45-51, where each unidirectional ring will forward alarm packets) and wherein when a failure is detected or a forward alarm signal is received by one of the number of remote units, the receiving remote unit selects the ring carrying the failure data or alarm signal to transmit traffic (Figure 4, where "TX all traffic on both Rings", hence the ring carrying the alarm signal is selected to transmit traffic) and selects the other ring to receive

traffic (Figure 4, where "If both Rings fail, RX traffic from both Rings", hence the other ring is selected to receive traffic).

However, Mitchell does not disclose expressly a return alarm signals on the other (second) transmission ring.

Suzuki discloses sending a first (forward) alarm packet on the faulty transmission ring and a second (return) alarm packet on the other ring (Figure 7b, "first alarm packet, and second alarm packet").

A person of ordinary skill in the art would have been motivated to employ Suzuki in Mitchell in order to obtain a two-ring system that notifies both rings of a fault. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Suzuki with Mitchell (collectively Mitchell-Suzuki) to obtain the invention as specified in claim 29. The suggestion/motivation to do so would have been to notify all (or some) nodes of both rings of a fault so as to adjust the path of transmitting and receiving (Figure 7b, and paragraph [0075]).

Regarding claim 30:

Mitchell discloses substantially all the claimed modified invention as specified above, however, does not disclose expressly at the head end (central) node, terminating received forward and return alarm signals.

Suzuki discloses at the head end node (central node) (i.e. packet transmission equipment 51-1), terminating received forward and return alarm signals (paragraph

[289], where first and second alarm packets have a destination of packet transmission equipment 51-1, hence are terminated there).

A person of ordinary skill in the art would have been motivated to employ Suzuki in Mitchell in order to obtain a head end node that terminates forward and return alarm signals. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Suzuki with Mitchell (collectively Mitchell-Suzuki) to obtain the invention as specified in claims 29 and 30. The suggestion/motivation to do so would have been to have the first and second alarm packets terminate at the head end node so that duplicate notification to the remote nodes is avoided.

5. Claims 16, 17, 18, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,442,134 (Mitchell) in view of U.S. Publication No. 2001/0019536 (Suzuki) and further in view of U.S. Patent No. 6,538,987 (Cedrone et al.).

Regarding claim 16:

Mitchell discloses a method of ring protection in an asynchronous transfer mode (ATM) synchronous optical ring network (col. 1, lines 8-12), the method comprising: at a central unit: feeding traffic on two transmission rings (Figure 4, i.e. node A); and summing all traffic received on the two transmission rings (Figure 4, i.e. node A); at a plurality of remote units: when one of the plurality of remote units detects a facility failure on one of the two transmission rings (col. 3, lines 45-51), transmitting forward alarm signals on the one of the two transmission rings (col. 3, lines 45-51, hence the forward alarm signal is detected by the next node on the corresponding transmission

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ring) and globally selecting the one of the two transmission rings to transmit traffic (Figure 4, "TX all traffic on both rings", hence one transmission ring is selected to transmit, (and transmits to the central unit node on first ring, i.e. node A)) and the other of the two transmission rings to receive traffic from the central unit (Figure 4, "If one ring fails, RX traffic from the other ring"); and when one of the plurality of remote units receives a forward alarm signal, passing the forward alarm signal on the one of the two transmission rings on which the forward alarm signal was received (col. 3, lines 45-51); and globally selecting the one of the two transmission rings on which the forward alarm signal was received to transmit traffic (Figure 4, "TX all traffic on both rings", hence the one transmission ring is selected to transmit (and transmits to the central unit node on first ring, i.e. node A)) and the other of the two transmission rings to receive traffic from the central unit (Figure 4, "If one ring fails, RX traffic from the other ring").

However, Mitchell does not disclose expressly a return alarm signals on the other transmission ring.

Suzuki discloses sending a first (forward) alarm packet on the faulty transmission ring and a second (return) alarm packet on the other ring (Figure 7b, "first alarm packet, and second alarm packet").

A person of ordinary skill in the art would have been motivated to employ Suzuki in Mitchell in order to obtain a two-ring system that notifies both rings of a fault. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Suzuki with Mitchell (collectively Mitchell-Suzuki). The suggestion/motivation to do so would have been to

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notify all (or some) nodes of both rings of a fault so as to adjust the path of transmitting and receiving (Figure 7b, and paragraph [0075]).

In addition, Mitchell does not disclose expressly a wherein the forward and return alarm signals are ATM level operations, administration and maintenance cells.

Cedrone et al. discloses wherein the forward and return alarm signals are ATM level operations, administration and maintenance cells (col. 8, lines 26-38, and col. 5, lines 37-44).

A person of ordinary skill in the art would have been motivated to employ Cedrone et al. with Mitchell-Suzuki in order to obtain a two-ring system that utilizes ATM level OAM cells. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Cedrone et al. in Mitchell-Suzuki (collectively Mitchell-Suzuki-Cedrone et al.) to obtain the invention as specified in claim 16. The suggestion/motivation to do so would have been to obtain a two-ring system that notifies each node of each ring of a fault in the system using the ATM OAM cell standard.

Regarding claim 17:

Mitchell discloses substantially all the claimed modified invention as specified above, however, does not disclose expressly when one of the plurality of remote units receives a return alarm signal, passing the return alarm signal on the one of the two transmission rings on which the return alarm signal was received; and globally selecting the one of the two transmission rings on which the return alarm signal was received to

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transmit traffic to the central unit and one of the two transmission rings to receive traffic from the central unit.

Suzuki discloses when one of the plurality of remote units receives a return alarm signal, passing the return alarm signal on the one of the two transmission rings on which the return alarm signal was received (Figure 7b, "second alarm packet", and paragraph [288], hence the second alarm packet is passed on the transmission ring); and globally selecting the one of the two transmission rings on which the return alarm signal was received to transmit traffic to the central unit (Figure 7b, where the transmission ring on which the second alarm packet was received is used to transmit traffic) and one of the two transmission rings to receive traffic from the central unit (Figure 7b, where the "reserve label path" is used also to receive traffic).

A person of ordinary skill in the art would have been motivated to employ Suzuki in Mitchell-Suzuki-Cedrone et al. in order to obtain a two-ring system that sends a return alarm signal to notify the nodes on the corresponding ring of the fault that has occurred. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Suzuki with Mitchell-Suzuki-Cedrone et al. (collectively Mitchell-Suzuki-Cedrone et al.) to obtain the invention as specified in claims 16 and 17. The suggestion/motivation to do so would have been to notify the nodes on the corresponding ring of the fault in order to adjust the path of transmitting and receiving (Suzuki, Figure 7b, and paragraph [0075]).

Regarding claim 18:

Mitchell further discloses wherein when one of the plurality of remote units detects a facility failure on one of the two transmission rings comprises when one of the plurality of remote units receives a ring level failure alarm on one of the two transmission rings (col. 3, lines 45-51, where "any node that has detected a fault on one of its incoming links", hence receives/detects a signal informing it of a failure).

Regarding claim 19:

Mitchell discloses substantially all the claimed modified invention as specified above, however, does not disclose expressly at the central unit, terminating received forward and return alarm signals.

Suzuki discloses at the central unit (i.e. packet transmission equipment 51-1), terminating received forward and return alarm signals (paragraph [289], where first and second alarm packets have a destination of packet transmission equipment 51-1, hence are terminated there).

A person of ordinary skill in the art would have been motivated to employ Suzuki in Mitchell-Suzuki-Cedrone et al. in order to obtain a central unit that terminates forward and return alarm signals. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Suzuki with Mitchell-Suzuki-Cedrone et al. (collectively Mitchell-Suzuki-Cedrone et al.) to obtain the invention as specified in claims 16 and 19. The suggestion/motivation to do so would have been to have the first and second alarm packets terminate at the central unit so that duplicate notification to the remote nodes is avoided.

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Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brad T. Mace whose telephone number is (571) 272-3128. The examiner can normally be reached on Monday -Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

btm

Brad T. Mace
Examiner
Art Unit 2663

btm

November 18, 2004


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SUPERVISORY PATENT EXAMINER
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